



ALLIED INTEROPERABILITY

Brief for CRWG

2-4 Nov 99

"It is not enough to be joint, when conducting future operations. We must find the most effective methods for integrating and improving interoperability with allied and coalition partners.....and increasingly, our procedures, programs, and planning must recognize this reality". ~ ***Joint Vision 2010.***

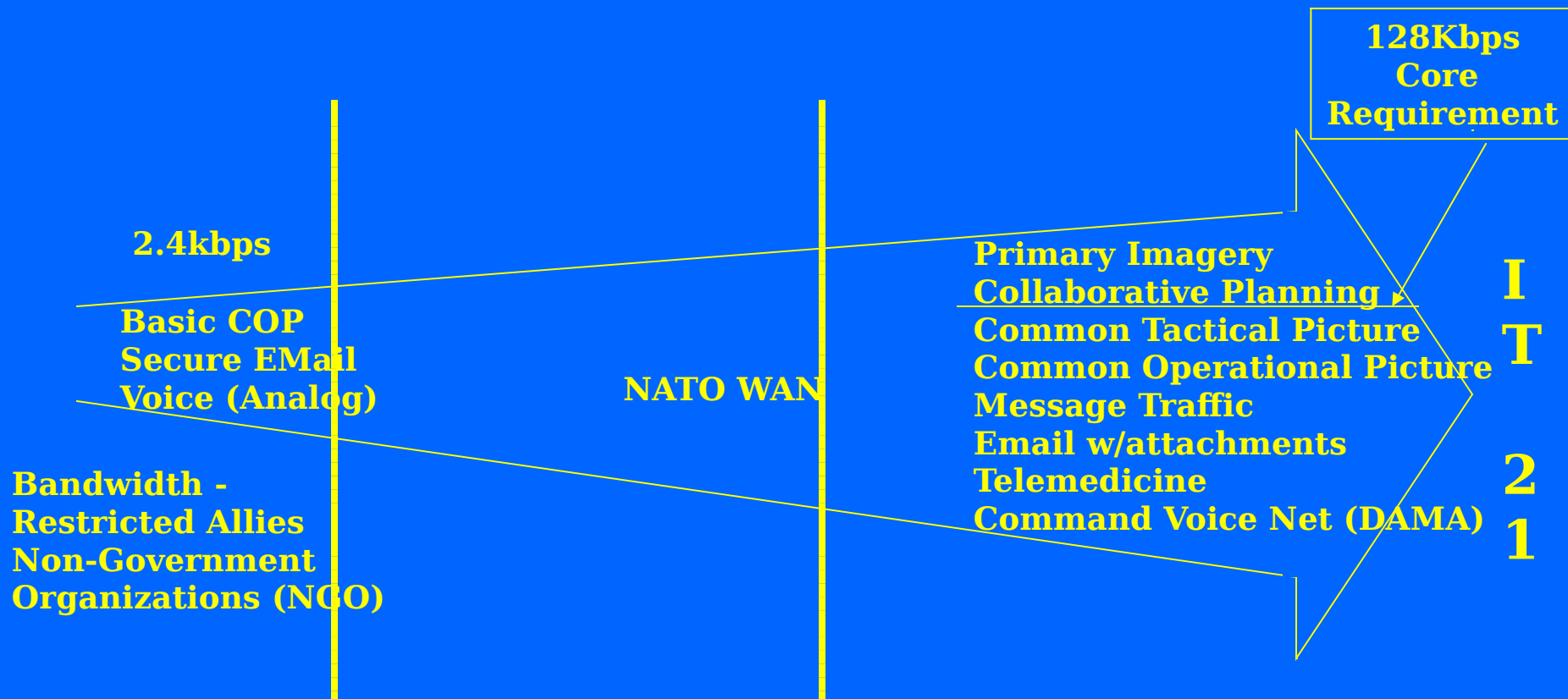
CONTENT

- **High to Low End**
- **High End - US/UK IP Net trial**
 - **Plan**
 - **Requirements**
 - **Security**
- **Mid - NATO WAN**
- **Low End Developments**
- **New guidance on security accreditation issued by J6**

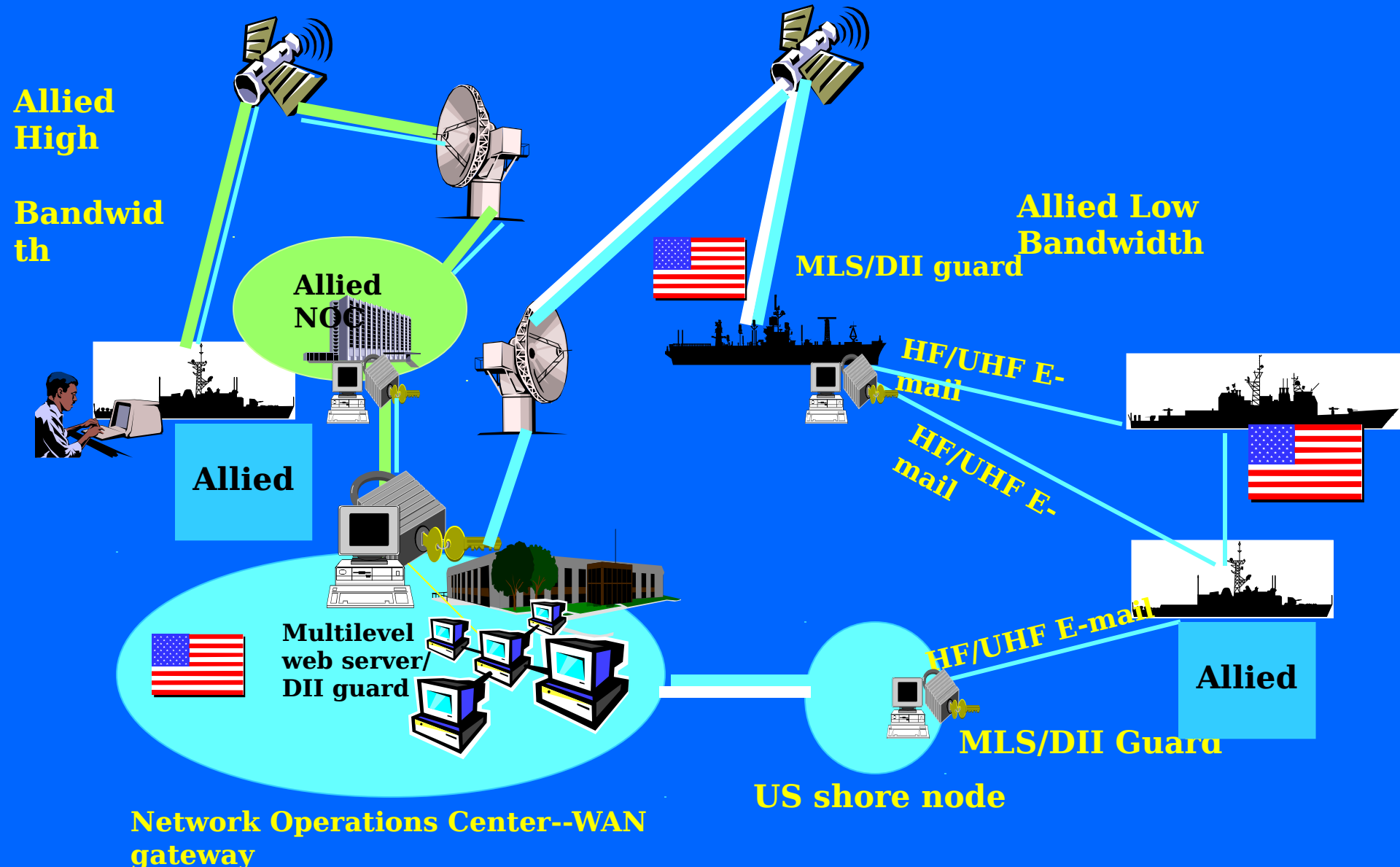
High to Low End Capability

- In response to Allied requirement to “plug-in” to US IT-21
- Limitations
 - bandwidth
 - security
- Leads to
 - High End (IT-21 Core - 128kbps) and US/UK trial
 - Low End (2.4kbps) and US/Allies trials
- CINCLANTFLT/C2F requirement to extend NATO LAN into deploying CVN/LHA-LHD & USN NATO Flagships

Example: Hi-Low IP Requirement



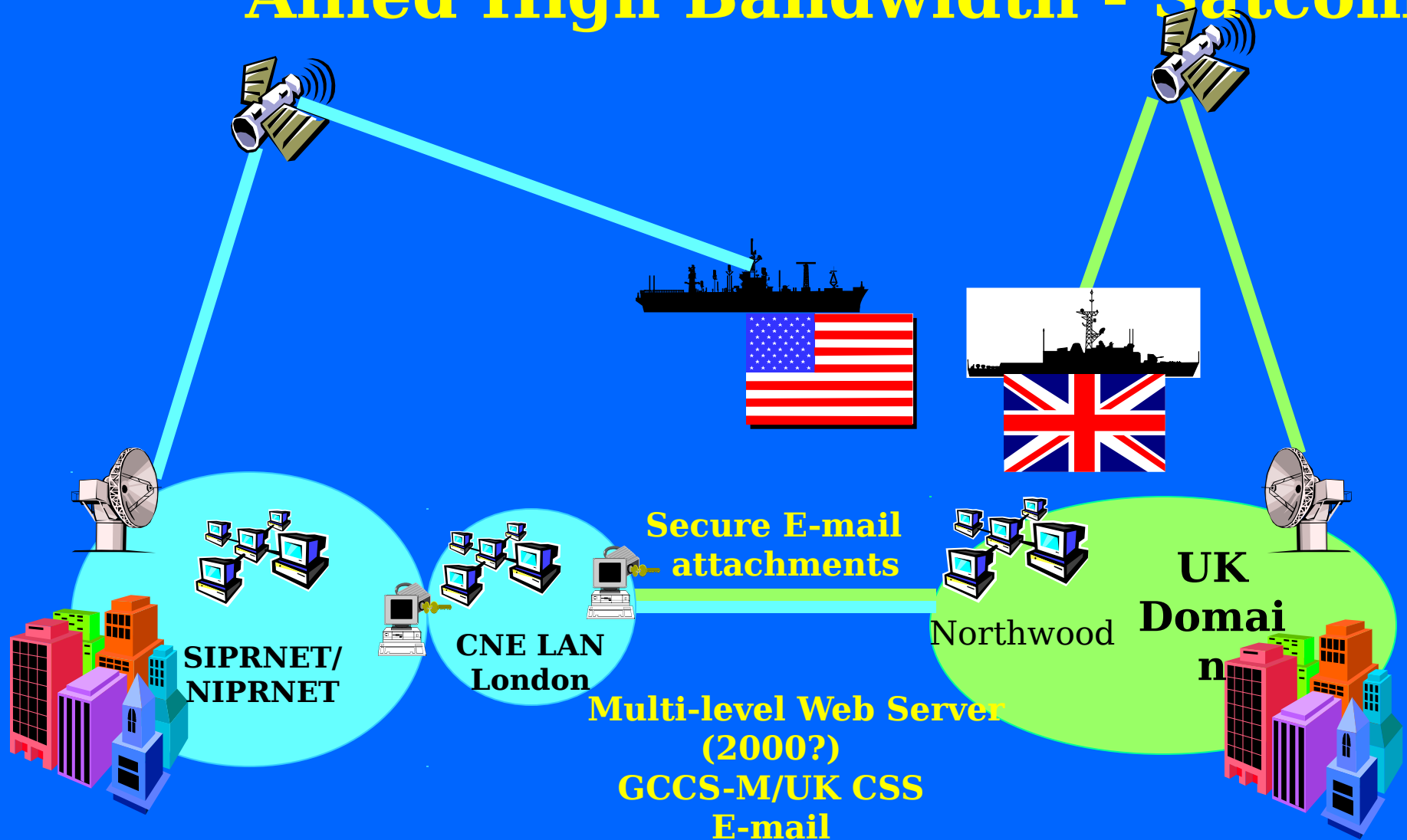
IT21 Allied Information Flow



HIGH END - US/UK IP NET

- **SATCOM dependent**
 - UK SHF
 - US SHF/INMARSAT B HSD
- **Bandwidth/Data Rate - 128 kbps**
- **Link between nations - CNE London**
- **Trial commenced Dec 98**
 - extended to HMS INVINCIBLE on 26 Mar 99
 - next phase for UK CVSG deployer in Jan 00

Allied High Bandwidth - Satcom



US/UK IP NET - PLAN

	Email without attach	Email with attach Class -	Prevent TX of email	ATO Exchange	WEB Browsing	GCCS-M / UK CSS interop
PHASE 1 31 Dec 98	Yes with current mail-guard	Yes with current mail-guard & ~~Yes - gap~~	Yes - with current mail-guard	Yes	No	No
PHASE 2 30 Nov 99	Yes - with current mail-guard	Yes - with current mail-guard & ~~fortezza~~	Yes - with current mail-guard	Yes	No	No
PHASE 3 30 Apr 00	Yes - New Wang Guard, ~~fortezza & UK mail-guard~~	Yes - New Wang Guard, ~~fortezza & UK mail-guard~~	Yes - New Wang Guard & UK mail-guard	Yes	Potentially - US MLS server	Yes - Initial capability to be tested

US/UK IP NET - Requirements

- **Attachments require Fortezza digital signature**
 - Fortezza offered to and accepted by UK for “trial”
- **US recommended extension of capability to COMUKTG shore HQ**
 - Establish link with Arabian Gulf BG
 - Early operational planning/liaison
- **US recommended for next UK deployer**
 - Increase number of Clients above that of HMS INVINCIBLE
 - Leads to significant increase in rapid exchange of info between warfighters

US/UK IP NET - Security

- **KIV7 - 1 year loan to UK (Northwood)**
 - expires Nov 99
 - UK to replace with purchase or compatible/interoperable security device
- **Secure Mail Guard (SMTP)**
 - Emails exchanged automatically between US/UK approved addressees
 - will allow receipt of attachments into US domain if fortezza signed. SMG reconfiguration
- **DII High Assurance Guard (X.400)**
 - Planned to be in place Apr 00
 - Fortezza still required

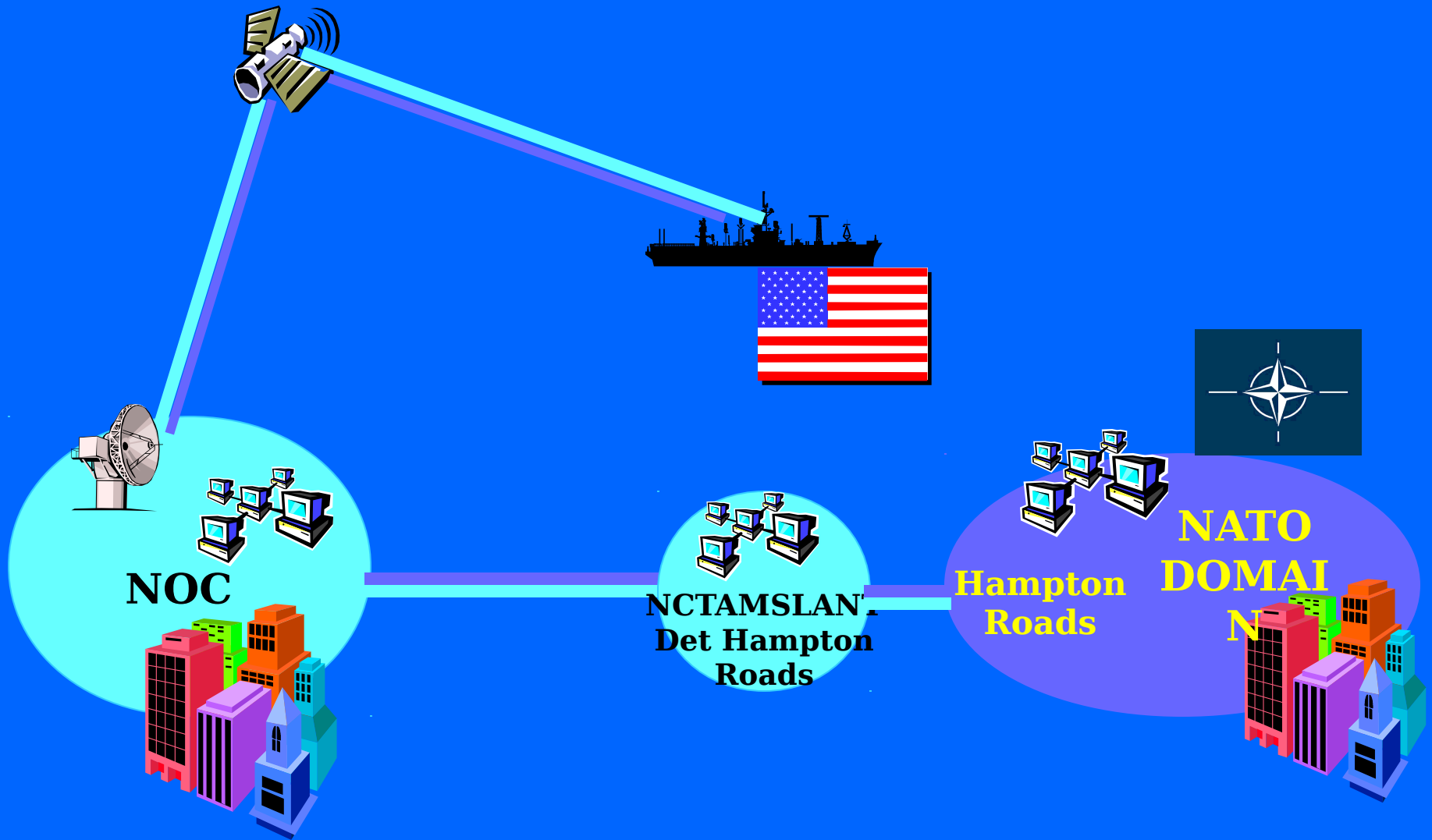
NATO WAN EXTENSION

- **SATCOM dependent**
 - **USN SHF for Large Decks**
 - **USN NATO Flagship INMARSAT B HSD**
- **Bandwidth/Data Rate - 64 kbps**
- **Link between USN/NATO - NCTAMSLANT Det/SACLANT TCF using DSCS**
- **Alternative NATO IVD- limitations**

NATO WAN - FITTED

- **FY 99**
 - **USS KEARSARGE - SURFLANT**
 - **USS BATAAN, J.F. KENNEDY, EISENHOWER, WASP, WASHINGTON & NASSAU(fitting now) - CNO**
- **NCTAMSLANT Det - HW & S/W**
- **FY 00**
 - **USS SAIPAN, TRUMAN, TORTUGA, MOOSBRUGGER, TICONDEROGA, ROOSEVELT & ENTERPRISE - CNO**

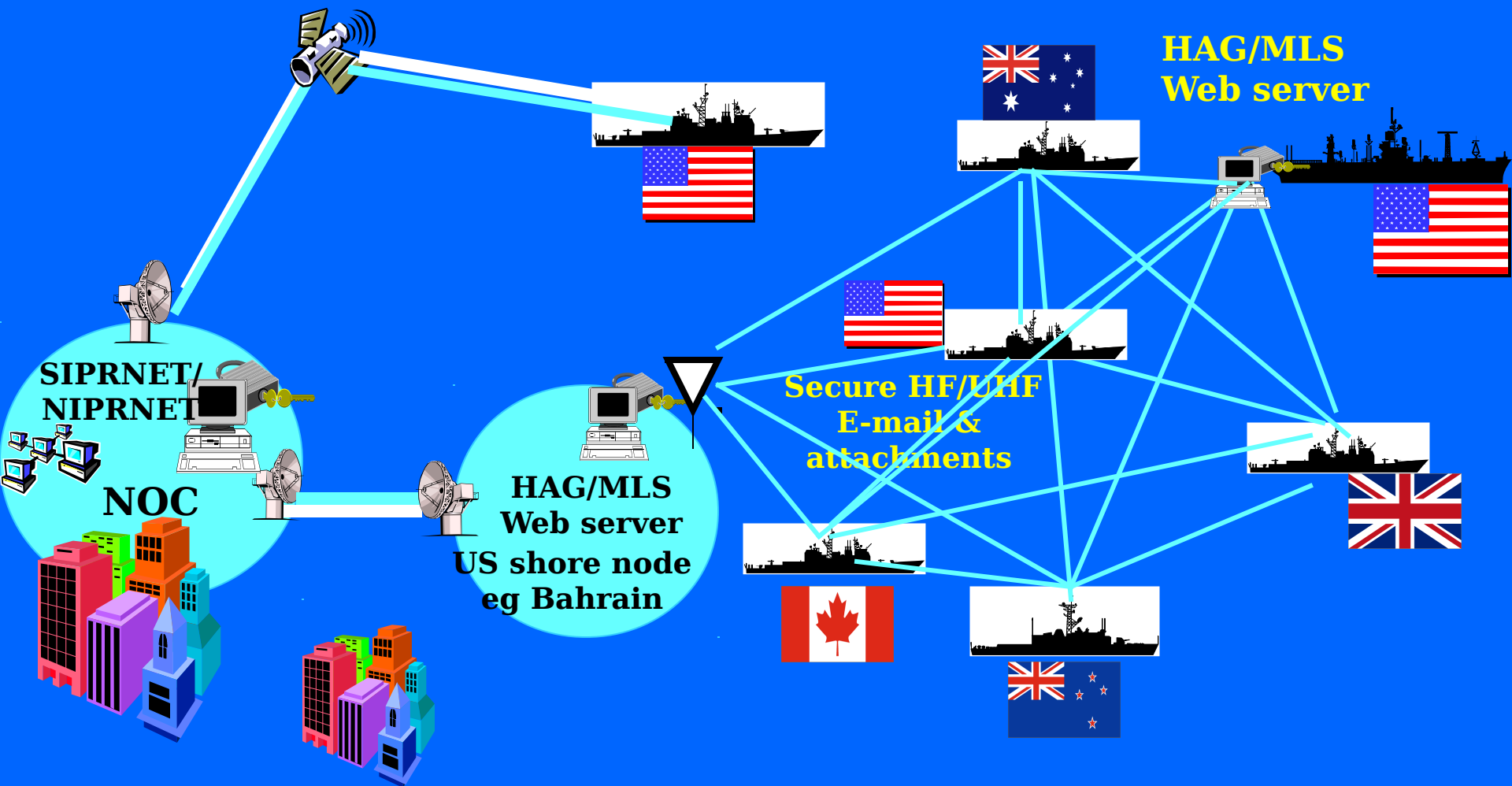
NATO WAN - Satcom



Low End US/Allies

- **Battle Force Email selected**
 - SMTP, KG84, JNOS software, Harris 5710 modem (2.4 kbps)
- **Installed in CVBG in Persian Gulf for CCDG, US MIO ships and US Support ships**
- **Installed in COMNAVCENT / C5F Bahrain**
 - SMG set-up similar to US/UK IP SMG at CNE
- **Installed in Australian, Canadian & NZ ships operating with US MIO Ships**
- **Being installed in UK DDG for FBE F**

Allied Low Bandwidth Information Flow -



Battle Force E-Mail

- **Operational Use**
 - **ATO**
 - **METOC**
 - **Flag/Operations Briefs**
 - **Archived Message Traffic**
 - **BG Admin**
 - **Logistics - Supply Queries**

Battle Force E-Mail

- **Hardware**

- Client PC w/Ethernet card
- Server PC w/Ethernet card
- Serial E-Mail card
- MILSTD 188-110A or STANAG 4285
Modems for HF or UHF LOS use

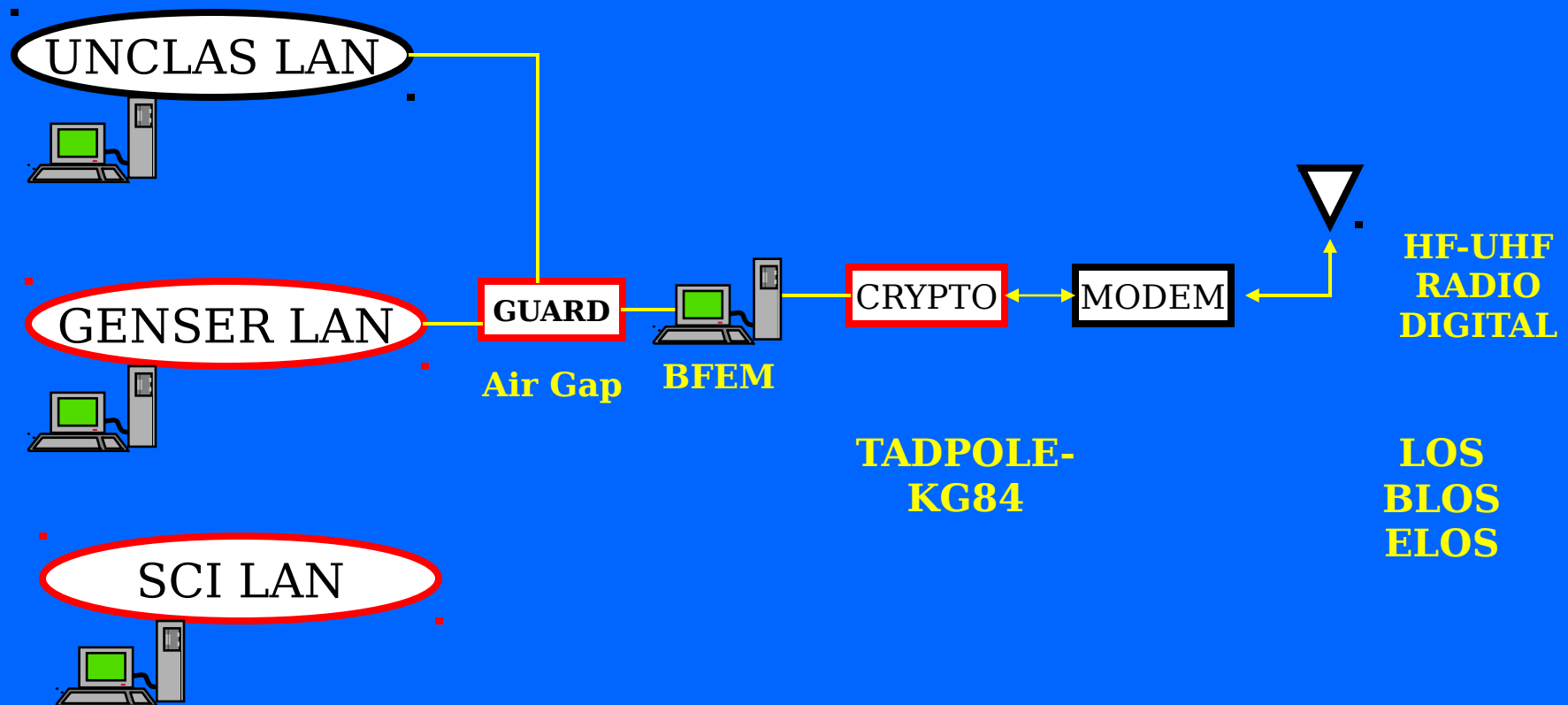
- **Software**

- Server - “JNOS” Amateur Radio
Shareware
- Client - SMTP/POP3 compatible
 - Eudora-Pro e-mail software

Battle Force E-Mail

- **Network & Server Operation**
 - **Automatic upon net establishment**
 - **Data conveyed point-to-point like Ethernet**
 - **Half-Duplex connection**
 - **Adaptive Link quality**
 - **“Return to Sender” if delivery not achievable**
 - **Data compression capable with Pentium**

BFEM Connectivity



Issues:

- Stovepipe as outside of ADNS/IT21
- Not network capable yet

BFEM Development

- **Software rewrite to Windows 98/NT**
- **Software rewrite to work with new STANAG 5066 Annex G compliant 9.6kbps modems**
 - **Move to network capability**
- **Lab test & field BFEM 9.6kbps capability**
- **Adopt STANAG 5066 (HF Data Profile)**
- **Trials/Operational with Allied nations and included in FBE F & G**
- **Trial at 19.2kbps in Jan/Feb 00**
- **BFEM development within IT21 matrix**
 - **Planning fit of 3 MEFs & 4 CVBGs in FY 00**
 - **Follow matrix for FY01→**

Security Accreditation - JS Guidance

- **Joint Staff Issued Interim Guidance for Temporary Connectivity to DISN Secret Net**
 - **Accreditation Letter (Interim Authority to Operate)**
 - **SIPRNET Access Authorization (SAA)**
 - **Signed consent to monitoring**
 - **An Interim Topology Diagram**
 - **MOU between US Command and Ally**
 - **Training Package**
- **Changes to Mail Guard, Topology or Ally requires resubmit**

ALLIED INTEROPERABILITY

